Grade 7
Mathematics

Constructed Response Scoring Guides
Winter 1998

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1998 Grade 7
MEAP Mathematics Scoring Guides

These scoring guides and annotated papers are provided to help you evaluate and score the constructed response items on the 1998 MEAP Mathematics test. For each item a rubric and an exemplar answer are given. Student papers are provided to illustrate the rubric. The annotations are on a separate page, so that the student papers can be copied and scored as part of training.

The scoring guides provided here represent only one possibility. You may decide to create your own scoring rubric. You may want to require that spelling and grammar are part of scoring, as well as labeling (units and graphs) and showing all work. Feel free to adjust and revise the scoring guide to fit your needs.

General Recommendations and Guidelines

- Studying the sample student responses and annotations will help you understand the essence of what is expected at each score point for a particular question. Keep in mind that these sample student responses represent only a few of the many possible responses for a given score point.

- To ensure the accuracy and consistency of your scoring:

  1. Continually review the scoring rubric and the sample student papers, especially when you are in doubt about a particular response.

  2. Do not judge one student's paper by another. Instead, apply the same objective criteria to each paper by evaluating the response in terms of the scoring guide.

  3. It is advisable to conceal student names when scoring.

  4. Review papers you scored earlier in the process to make sure you are using the same criteria.

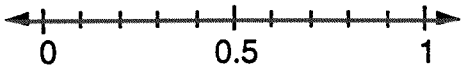
Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

A Choose any fraction between 0 and 1 (other than $\frac{1}{2}$) and convert it to a decimal. Show your work.

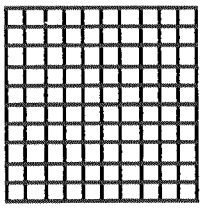
FRACTION I CHOSE _____

DECIMAL FORM OF MY FRACTION_____

B Locate the decimal equivalent of the fraction you chose on this number line.



C Represent your fraction by shading in the correct number of squares.



D Convert your fraction to a percent. _____

7th Grade Constructed Response #1, Rubric

Scoring Rubric: 5 points

Part A: 2 points

2 points Correct fraction chosen and correct decimal with correct work shown

1 point Correct fraction chosen and decimal form and work omitted
OR Correct decimal with incomplete or omitted work
OR Incorrect decimal due to computation error; work shown

0 points Incorrect decimal; work omitted
OR Any other response

Part B: 1 point

1 point Decimal correctly located on number line.

0 points Decimal incorrectly located

Part C: 1 point

1 point Hundredths square correctly shaded.
OR Answer based on incorrect conversion in Part A

0 points Hundredths square incorrectly shaded.
OR Any other response

Part D: 1 point

1 point Fraction correctly converted to percent.

0 points Fraction incorrectly converted to percent.
OR Any other response

7th Grade Constructed Response #1, Exemplar

Exemplar

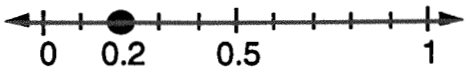
A Teacher needs to follow student choice of fraction throughout Parts A-D.
For example, if student chooses $\frac{1}{5}$,

FRACTION I CHOSE $\frac{1}{5}$

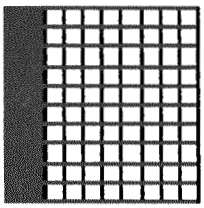
DECIMAL FORM OF MY FRACTION 0.2

$$5\overline{)1.0}\quad 0.2$$

B



C



D 20%

GRADE 7 CONVERSION PROBLEM

#1 Score: 0
The fraction chosen is not between 0 and 1. The decimal form is incorrect. Part B was omitted. Parts C and D are incorrect.

#2 Score: 1
1 point for Part A. Student chose a correct fraction in Part A but omitted the remainder of the problem.

#3 Score: 1
Student chose a correct fraction but all other parts are incorrect.

#4 Score: 2
Student received 1 point in Part A for choosing the correct fraction. Decimal form in part A is incorrect. Part B is incorrect. Student received an additional point in Part C which is correct. Part D was omitted.

#5 Score: 3
2 points for correct answers in Part A. 0 points for Part B. 0 points for Part C. 1 point for Part D.

#6 Score: 4
Part A: 0 points. Student chose 2/4 but this is equivalent to 1/2. Directions state to choose a fraction other than 1/2. All other parts are correct based on incorrect choice of fraction. Student receives 4 points.

#7 Score: 4
2 points for Part A. 0 points for Part B. 1 point for Part C and 1 point for Part D.

#8 Score: 5
Entire response is correct.

PAPER 1

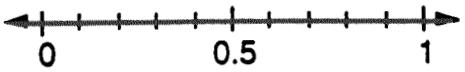
Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

A Choose any fraction between 0 and 1 (other than $\frac{1}{2}$) and convert it to a decimal. Show your work.

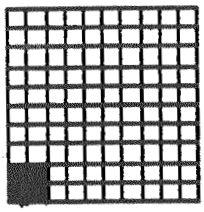
FRACTION I CHOSE $\frac{0}{4}$

DECIMAL FORM OF MY FRACTION 0.4

B Locate the decimal equivalent of the fraction you chose on this number line.



C Represent your fraction by shading in the correct number of squares.



D Convert your fraction to a percent. 4%

PAPER 2

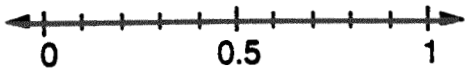
Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

A Choose any fraction between 0 and 1 (other than $\frac{1}{2}$) and convert it to a decimal. Show your work.

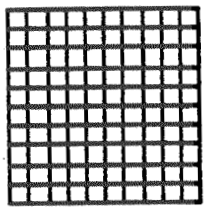
FRACTION I CHOSE $\frac{1}{3}$

DECIMAL FORM OF MY FRACTION_____

B Locate the decimal equivalent of the fraction you chose on this number line.



C Represent your fraction by shading in the correct number of squares.



D Convert your fraction to a percent. _____

PAPER 3

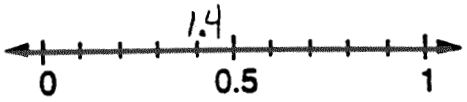
Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

A Choose any fraction between 0 and 1 (other than $\frac{1}{2}$) and convert it to a decimal. Show your work.

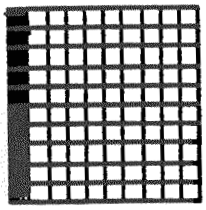
FRACTION I CHOSE 1/4

DECIMAL FORM OF MY FRACTION 1.4

B Locate the decimal equivalent of the fraction you chose on this number line.



C Represent your fraction by shading in the correct number of squares.



D Convert your fraction to a percent. 4%

PAPER 4

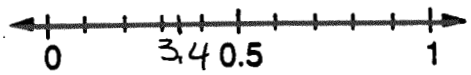
Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

A Choose any fraction between 0 and 1 (other than $\frac{1}{2}$) and convert it to a decimal. Show your work.

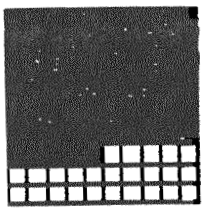
FRACTION I CHOSE $\frac{75}{100}$

DECIMAL FORM OF MY FRACTION 3,4

B Locate the decimal equivalent of the fraction you chose on this number line.



C Represent your fraction by shading in the correct number of squares.



D Convert your fraction to a percent. _____

PAPER 5

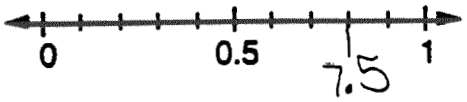
Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

A Choose any fraction between 0 and 1 (other than $\frac{1}{2}$) and convert it to a decimal. Show your work.

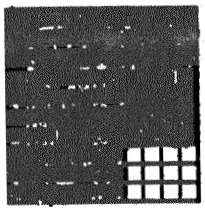
FRACTION I CHOSE $\frac{3}{4}$

DECIMAL FORM OF MY FRACTION .75

B Locate the decimal equivalent of the fraction you chose on this number line.



C Represent your fraction by shading in the correct number of squares.



D Convert your fraction to a percent. 75%

PAPER 6

Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

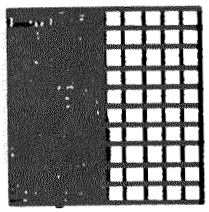
A Choose any fraction between 0 and 1 (other than $\frac{1}{2}$) and convert it to a decimal. Show your work.

FRACTION I CHOSE $\frac{2}{4}$

DECIMAL FORM OF MY FRACTION .5

B Locate the decimal equivalent of the fraction you chose on this number line.

C Represent your fraction by shading in the correct number of squares.



D Convert your fraction to a percent. 50%

PAPER 7

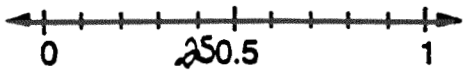
Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

A Choose any fraction between 0 and 1 (other than $\frac{1}{2}$) and convert it to a decimal. Show your work.

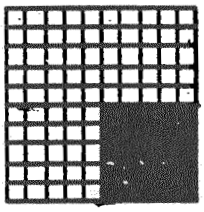
FRACTION I CHOSE $\frac{1}{4}$

DECIMAL FORM OF MY FRACTION .25

B Locate the decimal equivalent of the fraction you chose on this number line.



C Represent your fraction by shading in the correct number of squares.



D Convert your fraction to a percent. 25%

PAPER 8

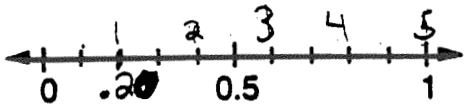
Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

A Choose any fraction between 0 and 1 (other than $\frac{1}{2}$) and convert it to a decimal. Show your work.

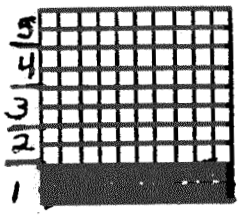
FRACTION I CHOSE $\frac{1}{5}$

DECIMAL FORM OF MY FRACTION .20

B Locate the decimal equivalent of the fraction you chose on this number line.



C Represent your fraction by shading in the correct number of squares.



D Convert your fraction to a percent. 20%

20 changes to 20%

Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

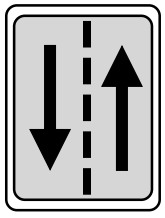
There are 4 types of transformations.

1) A "slide" is also called a "translation."
2) A "turn" is also called a "rotation."
3) A "flip" is also called a "reflection" (mirror image).
4) A "size change" is called an "enlargement" or "reduction."

Choose one of the four transformations.

A Write down the one you chose.

B Use the transformation you chose to draw the image of the road sign.



7th Grade Constructed Response #2, Rubric

Scoring Rubric: 2 points

Part A: no points

Part B: 2 points

2 points Drawing matches chosen transformation.

1 point Drawing is partially correct but incomplete.
OR One arrow is correct and one is incorrect.
OR Student draws a different road sign and performs correct transformation.

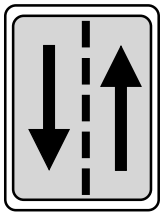
0 points Drawing does not match transformation named.
OR Image does not contain elements/shape of preimage.
OR Drawing omitted.

7th Grade Constructed Response #2, Exemplar

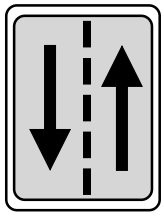
Exemplar

A and B

slide/translation (Student must show movement of sign: any slide movement is correct.)

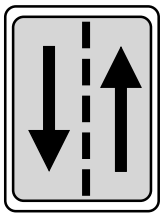


PREIMAGE

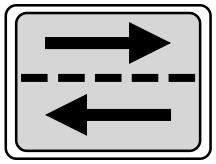


IMAGE

turn/rotation (Student must show rotated sign: clockwise or counterclockwise, any number of degrees.)

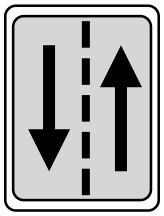


PREIMAGE

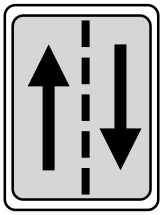


IMAGE

flip/reflection (Any flip or mirror image is acceptable.)

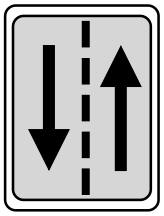


PREIMAGE

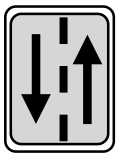


IMAGE

size change (Student must show smaller or larger sign. Change should appear proportional.)



PREIMAGE



IMAGE

Grade 7 Transformation Problem

#1 Score: 0

Part B: 0

Student did not sketch a flip of the given figure.

#2 Score: 0

Part B: Student did not perform the given transformation correctly.

#3: Score: 1

Part B: 1 point. Student did not sketch a flip; sketched a rotation.

#4 Score: 2

Part B: Student correctly sketched a rotation and also stated degrees rotated.

#5 Score: 2

Part B: Student correctly sketched size change.

PAPER 1

Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

There are 4 types of transformations.

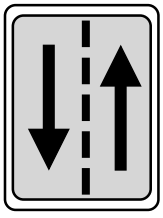
1) A "slide" is also called a "translation."
2) A "turn" is also called a "rotation."
3) A "flip" is also called a "reflection" (mirror image).
4) A "size change" is called an "enlargement" or "reduction."

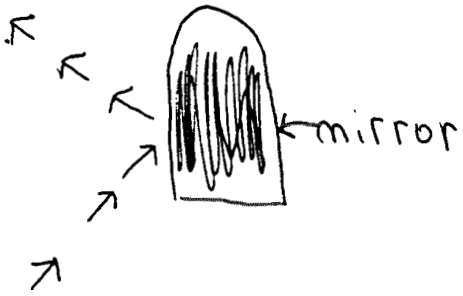
Choose one of the four transformations.

A Write down the one you chose.

flip

B Use the transformation you chose to draw the image of the road sign.





PAPER 2

Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

There are 4 types of transformations.

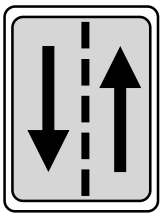
1) A "slide" is also called a "translation."
2) A "turn" is also called a "rotation."
3) A "flip" is also called a "reflection" (mirror image).
4) A "size change" is called an "enlargement" or "reduction."

Choose one of the four transformations.

A Write down the one you chose.

2) A "turn".

B Use the transformation you chose to draw the image of the road sign.



PAPER 3

Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

There are 4 types of transformations.

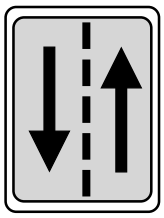
1) A "slide" is also called a "translation."
2) A "turn" is also called a "rotation."
3) A "flip" is also called a "reflection" (mirror image).
4) A "size change" is called an "enlargement" or "reduction."

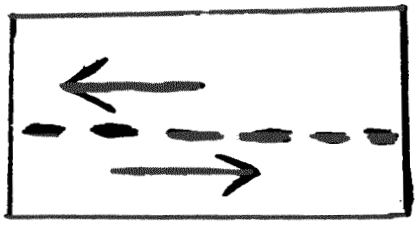
Choose one of the four transformations.

A Write down the one you chose.

A Flip

B Use the transformation you chose to draw the image of the road sign.





PAPER 4

Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

There are 4 types of transformations.

1) A "slide" is also called a "translation."
2) A "turn" is also called a "rotation."
3) A "flip" is also called a "reflection" (mirror image).
4) A "size change" is called an "enlargement" or "reduction."

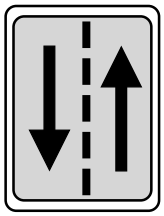
Choose one of the four transformations.

A Write down the one you chose.

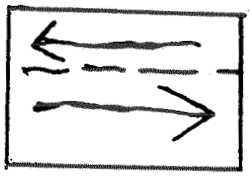
Rotation

B Use the transformation you chose to draw the image of the road sign.

180° or 360°



90° or 270°



PAPER 5

Directions: Solve the following problem. There may be more than one way to answer correctly. Show as much of your work as possible.

There are 4 types of transformations.

1) A "slide" is also called a "translation."
2) A "turn" is also called a "rotation."
3) A "flip" is also called a "reflection" (mirror image).
4) A "size change" is called an "enlargement" or "reduction."

Choose one of the four transformations.

A Write down the one you chose.

Size change

B Use the transformation you chose to draw the image of the road sign.